ATENT COOPERATION TRE. .TY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
United States Patent and Trademark Office
Box PCT
Washington, D.C.20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing: 16 March 2000 (16.03.00)	
International application No.: PCT/CH98/00376	Applicant's or agent's file reference: 81.318/CS/mb
International filing date: 02 September 1998 (02.09.98)	Priority date:
Applicant: KELLER, Judith et al	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International preliminary Examining Authority on:

27 January 2000 (27.01.00)

[] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer:

J. Zahra

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

To:

BOVARD AG
Optingenstrasse 16
CH-3000 Bern 25
SUISSE

RECEIVED
AUG 0 6 2001
Technology Center 2600

Date of mailing (day/month/year)	IMPORTANT NOTIFICATION
26 June 2001 (26.06.01)	
Applicant's or agent's file reference	
81.318/CS/mb	
International application No.	**International filing date** (day/month/year)
PCT/CH98/00376	02 September 1998 (02.09.98)

1. The following indications appeared on record concerning:

[X] the applicant [X] the inventor [] the agent [] the common representative

Name and Address	State of Nationality	State of Residence
KELLER, Judith Wannenfeldstr. 97 CH-8500 Frauenfeld Switzerland	CH	CH
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

[] the person [X] the name [] the address [] the nationality [] the residence

Name and Address	State of Nationality	State of Residence
BLANK, Judith Wannenfeldstr. 97 CH-8500 Frauenfeld Switzerland	CH	CH
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

[X] the receiving Office
[] the International Searching Authority
[] the International Preliminary Examining Authority
[] the designated Offices concerned
[X] the elected Offices concerned
[] other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer G. Bähr
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

To:

BOVARD AG
Optingenstrasse 16
CH-3000 Bern 25
SUISSE

Date of mailing (day/month/year)
30 January 2001 (30.01.01)

Applicant's or agent's file reference
81.318/CS/mb

IMPORTANT NOTIFICATION

International application No.
PCT/CH98/00376

International filing date (day/month/year)
02 September 1998 (02.09.98)

1. The following indications appeared on record concerning:

[X] the applicant [] the inventor [] the agent [] the common representative

Name and Address
SWISSCOM AG
Viktoriastr. 21
CH-3050 Bern
Switzerland

State of Nationality: CH
State of Residence: CH
Telephone No.:
Facsimile No.:
Teleprinter No.:

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

[X] the person [] the name [] the address [] the nationality [] the residence

Name and Address
SWISSCOM MOBILE AG
Schwarztorstrasse 61
CH-3050 Bern
Switzerland

State of Nationality: CH
State of Residence: CH
Telephone No.:
Facsimile No.:
Teleprinter No.:

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

[X] the receiving Office
[] the International Searching Authority
[X] the International Preliminary Examining Authority
[] the designated Offices concerned
[X] the elected Offices concerned
[] other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

Authorized officer
N. Lindner
Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

BOVARD AG
Optingenstrasse 16
CH-3000 Bern 25
SUISSE

BOVARD AG
5. FEB. 2001
81317 | RJ

Date of mailing (day/month/year) 30 January 2001 (30.01.01)	
Applicant's or agent's file reference 81.318/CS/mb	**IMPORTANT NOTIFICATION**
International application No. PCT/CH98/00376	**International filing date** (day/month/year) 02 September 1998 (02.09.98)

1. The following indications appeared on record concerning:

[X] the applicant [] the inventor [] the agent [] the common representative

Name and Address	State of Nationality	State of Residence
SWISSCOM AG Viktoriastr. 21 CH-3050 Bern Switzerland	CH	CH
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

[X] the person [] the name [] the address [] the nationality [] the residence

Name and Address	State of Nationality	State of Residence
SWISSCOM MOBILE AG Schwarztorstrasse 61 CH-3050 Bern Switzerland	CH	CH
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

[X] the receiving Office
[] the International Searching Authority
[X] the International Preliminary Examining Authority
[] the designated Offices concerned
[X] the elected Offices concerned
[] other:

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer N. Lindner
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

Form PCT/IB/306 (March 1994)

003804437

09/786196
JC02 Rec'd PCT/PTO 02 MAR 2001

VERIFICATION OF TRANSLATION

I, the undersigned, hereby declare:

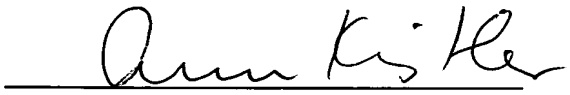
That my name and address are as stated below under my signature;

That I am conversant with the English and German languages; and

That the attached translation is a true translation prepared by me of the accompanying International Application No. PCT/CH98/00376, filed on September 2, 1998, and of the accompanying amended pages filed on December 2, 1999, on September 27, 2000, and on November 22, 2000, respectively.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any U.S. patent issued thereon.

February 16, 2001



(signature)
Ann Kistler
Friedlistrasse 4
CH-3006 Berne
Switzerland

09/786196
JC02 Rec'd PCT/PTO 0 2 MAR 2001

TRANSLATION

Patent Cooperation Treaty

Appointment of an agent or common representative

The undersigned applicant(s) hereby appoint(s)

BOVARD LTD
Patent Attorneys
Optingenstrasse 16
CH-3000 Berne 25

to act before the competent international authorities concerning the international application filed with the Federal Institute of Intellectual Property, 3003 Berne, entitled:
"Flat Display and Mobile Radio Telephone with a Flat Display"

Agent's file reference: 81.318/CS/mb

Number of the international application:

Berne	25th March 1998
(place)	(date)
(signature)	
(signature(s) of the applicant(s))	(signature)
Swisscom AG Walter Heutschi	Judith Keller (inventor)
	(signature)
	Rudolf Ritter (inventor)

Please typewrite the name under each signature.

Claims

1. A flat display (10) for an electrically autonomous device (1) on which information can be displayed, and which flat display can be electrically controlled to become reflecting, wherein it comprises a background display layer (102, 103), which can be changed from a reflecting to a non-reflecting state with electrical control signals, and a foreground display layer (101), which can be changed from a transparent state into a non-transparent state with other electrical control signals.

2. The flat display according to claim 1, wherein it can be electrically controlled so that only a portion of said display becomes reflecting.

3. The flat display according to claim 2, wherein the text information and/or picture information can be displayed on the remaining, non-reflecting portion of the display.

4. The flat display according to claim 4, wherein said background display layer (102, 103) comprises a display layer (102) which can be controlled from a transparent into a colored state with electrical control signals, and a reflecting layer (103).

5. The flat display according to claim 4, wherein the reflecting layer (103) is concave or convex.

6. The flat display according to one of the claims 1 to 5, wherein said foreground display layer (101) comprises a liquid crystal display.

7. The flat display according to one of the claims 1 to 6, wherein said background display layer (102, 103) comprises a liquid crystal display.

8. The flat display according to one of the claims 4 to 7, wherein said reflecting layer (103) comprises a film made of aluminum.

9. A mobile radio telephone (1) with a flat display according to one of the claims 1 to 8.

10. The mobile radio telephone according to claim 9, wherein it contains an identification card (13), a processor is integrated into the identification card, and the reflecting state of the display can be controlled with this processor.

AMENDED PAGE (ARTICLE 19)

11. The mobile radio telephone according to claim 9 or 10, wherein the reflecting state of the display can be remotely controlled with data messages.

12. The mobile radio telephone according to one of the claims 9 to 11, wherein it comprises operating elements (120) to control the reflecting or non-reflecting state of the display (10).

13. The mobile radio telephone according to one of the claims 9 to 12, wherein the display is reflecting when the mobile radio telephone is switched off.

14. A method of displaying information on a flat display (10) of a mobile radio telephone (1) via a supplementary service, wherein this information is displayed in that a portion of said flat display is controlled in a reflecting or non-reflecting state.

15. The method according to claim 14, wherein said information comprises the identification of the provider of the supplementary service.

16. The method according to claim 14 or 15, wherein said display is controlled with a processor in the identification card (13) of the mobile radio telephone (1).

17. The method according to one of the claims 14 to 16, wherein said display can be controlled with data messages.

AMENDED PAGE (ARTICLE 19)

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C02 Rec'd PCT/PTO 0 2 MAR 2001

Flat Display and Mobile Telephone with a Flat Display

The present invention relates to a flat display. In particular, the present invention relates to a flat display for an electrically autonomous device, for example a mobile radio telephone.

Mobile radio telephones are becoming more and more miniaturized, and therefore can easily be taken along in a pocket or in a handbag. The same also applies for other portable electronic devices, such as, for example, pocket calculators, laptops, palmtops, etc.

It is therefore the object of this invention to provide a mobile radio telephone with other functions, which are made use of again and again also when en route.

According to this invention, this object is achieved through the features of claim 1.

In particular, this object is achieved through a flat display which can be controlled electrically so that the display surface can be made reflecting.

In this way the display of the device can also be used as a practical pocket mirror.

The display can preferably be controlled electrically in order to become reflecting when no information is being shown, in particular in standby mode. In another preferred variant of the invention, also only one portion of the display surface can be made reflecting; information and/or advertisements can be displayed on the remaining portion of the display surface. In this way, the users can be made aware, in an effective way, of important information and in particular of company names and logos of service providers.

The invention will be better understood with the aid of the description illustrated by the attached figures:

Figure 1 shows a view from above of a mobile radio telephone with a display according to the invention controlled and used as a mirror.

Figure 2 is a view from above of the same mobile telephone, where, however, one portion of the display is controlled as a mirror while information is being shown on the remaining portion.

Figure 3 is a view from above of the same mobile radio telephone, where , however, information is being shown on the entire display.

ART 34 AMDT

Claims

1. A flat display (10) for an electrically autonomous device (1) on which information can be displayed, wherein it can be electrically controlled to become reflecting.

2. The flat display according to claim 1, wherein it can be electrically controlled so that only a portion of said display becomes reflecting.

3. The flat display according to claim 2, wherein the text information and/or picture information can be displayed on the remaining, non-reflecting portion of the display.

4. The flat display according to one of the claims 1 to 3, wherein it comprises a background display layer (102, 103), which can be changed from a reflecting to a non-reflecting state with electrical control signals, and a foreground display layer (101), which can be changed from a transparent state into a non-transparent state with other electrical control signals.

5. The flat display according to claim 4, wherein said background display layer (1002, 103) <*sic. (102, 103)*> comprises a display layer (102) which can be controlled from a transparent into a colored state with electrical control signals, and a reflecting layer (103).

6. The flat display according to one of the claims 4 or 5, wherein said foreground display layer (101) comprises a liquid crystal display.

7. The flat display according to one of the claims 4 to 6, wherein said background display layer (102, 103) comprises a liquid crystal display.

8. The flat display according to one of the claims 5 to 7, wherein said reflecting layer (103) comprises a film made of aluminum.

9. A mobile radio telephone (1) with a flat display according to one of the claims 1 to 8.

10. The mobile radio telephone according to claim 9, wherein it contains an identification card (13), a processor is integrated into the identification card, and the reflecting state of the display can be controlled with this processor.

11. The mobile radio telephone according to claim 9 or 10, wherein the reflecting state of the display can be remotely controlled with data messages.

ART 34 AMDT

12. The mobile radio telephone according to one of the claims 9 to 11, wherein it comprises operating elements (120) to control the reflecting or non-reflecting state of the display (10).

13. The mobile radio telephone according to one of the claims 9 to 12, wherein the display is reflecting when the mobile radio telephone is switched off.

14. A method of displaying information on a flat display (10) of a mobile radio telephone (1) via a supplementary service, wherein this information is displayed in that a portion of said flat display is controlled in a reflecting or non-reflecting state.

15. The method according to claim 14, wherein said information comprises the identification of the provider of the supplementary service.

16. The method according to claim 14 or 15, wherein said display is controlled with a processor in the identification card (13) of the mobile radio telephone (1).

17. The method according to one of the claims 14 to 16, wherein said display can be controlled with data messages.

ART 34 AMDT

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Translation

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 81.318/DV/mb	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/CH98/00376	International filing date (*day/month/year*) 02 September 1998 (02.09.98)	Priority date (*day/month/year*)
International Patent Classification (IPC) or national classification and IPC H04M 1/02		
Applicant SWISSCOM MOBILE AG		

RECEIVED
MAY 16 2001
TC 2600 MAILROOM

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
27 January 2000 (27.01.00)	20 December 2000 (20.12.2000)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/CH98/00376

I. Basis of the report

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

☐ the international application as originally filed.

☒ the description, pages 2-5, as originally filed,
pages _____, filed with the demand,
pages 1,1a, filed with the letter of 25 September 2000 (25.09.2000),
pages _____, filed with the letter of _____.

☒ the claims, Nos. _____, as originally filed,
Nos. _____, as amended under Article 19,
Nos. _____, filed with the demand,
Nos. 1-12, filed with the letter of 20 November 2000 (20.11.2000),
Nos. _____, filed with the letter of _____.

☒ the drawings, sheets/fig 1/2,2/2, as originally filed,
sheets/fig _____, filed with the demand,
sheets/fig _____, filed with the letter of _____,
sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-12	YES
	Claims		NO
Inventive step (IS)	Claims	1-12	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations

D1: US-A-5 566 224 (LUNDHOLM ANDREW S. ET AL.) 15 October 1996.

1) **D1**, which discloses *inter alia* a (flat) screen for communications devices which is integrated in a mirror, is considered to represent the closest prior art to the subject matter of **Claim 1**. In accordance with the preamble to **Claim 1**, **D1** discloses a flat screen for an electrically autonomous device (see Figure 3) on which information can be displayed and which can be controlled electronically so as to become reflective. In D1, this is achieved by means of an electrochromic mirror layer in the foreground and, for example, a conventional liquid crystal or LCD background display layer (see 308 in Figure 3; and column 3, lines 28-45).

Unlike D1, **Claim 1** defines a flat screen characterised in that by virtue of its special arrangement of layers, in addition to selectively reflecting, the screen has not just one, but two planes for displaying information. Thus, using the same number of electrical control systems (one for the background layer and one for the foreground layer) as in the configuration suggested by **D1** (one control system for the electrochromic mirror and at least one for a background

layer using LCD technology, for example), i.e. at a similar though not small cost, an increased degree of display flexibility can be achieved.

Neither **D1** nor any other document cited in the international search report contains any indication which would directly lead a person skilled in the art, starting with a comparably simple arrangement of layers (as defined in Claim 1), to produce a flat screen offering as many information display options as the present invention (the entire display as a mirror, partially mirrored display, coloured text on a mirrored background, coloured text on a background of a different colour, mirrored text against a coloured background, etc.).

Consequently, the subject matter of Claim 1 is considered to involve an inventive step, and **Claim 1** is therefore considered as satisfying the requirements of **PCT Article 33(2) and (3).**

2) Since **Claims 2-12** contain all of the features defined in **Claim 1**, they likewise satisfy the requirements of **PCT Article 33(2) and (3).**

T17

VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESENS

PCT

REC'D 29 DEC 2000
WIPO PCT

INTERNATIONALER VORLÄUFIGER PRÜFUNGSBERICHT

(Artikel 36 und Regel 70 PCT)

Aktenzeichen des Anmelders oder Anwalts	WEITERES VORGEHEN	siehe Mitteilung über die Übersendung des internationalen vorläufigen Prüfungsberichts (Formblatt PCT/IPEA/416)
81.318/DV/mb		
Internationales Aktenzeichen	Internationales Anmeldedatum *(Tag/Monat/Jahr)*	Prioritätsdatum *(Tag/Monat/Tag)*
PCT/CH98/00376	02/09/1998	02/09/1998

Internationale Patentklassifikation (IPK) oder nationale Klassifikation und IPK
H04M1/02

Anmelder
SWISSCOM AG et al.

1. Dieser internationale vorläufige Prüfungsbericht wurde von der mit der internationalen vorläufigen Prüfung beauftragten Behörde erstellt und wird dem Anmelder gemäß Artikel 36 übermittelt.

2. Dieser BERICHT umfaßt insgesamt 5 Blätter einschließlich dieses Deckblatts.

 ☒ Außerdem liegen dem Bericht ANLAGEN bei; dabei handelt es sich um Blätter mit Beschreibungen, Ansprüchen und/oder Zeichnungen, die geändert wurden und diesem Bericht zugrunde liegen, und/oder Blätter mit vor dieser Behörde vorgenommenen Berichtigungen (siehe Regel 70.16 und Abschnitt 607 der Verwaltungsrichtlinien zum PCT).

 Diese Anlagen umfassen insgesamt 4 Blätter.

3. Dieser Bericht enthält Angaben zu folgenden Punkten:

 - I ☒ Grundlage des Berichts
 - II ☐ Priorität
 - III ☐ Keine Erstellung eines Gutachtens über Neuheit, erfinderische Tätigkeit und gewerbliche Anwendbarkeit
 - IV ☐ Mangelnde Einheitlichkeit der Erfindung
 - V ☒ Begründete Feststellung nach Artikel 35(2) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit; Unterlagen und Erklärungen zur Stützung dieser Feststellung
 - VI ☐ Bestimmte angeführte Unterlagen
 - VII ☐ Bestimmte Mängel der internationalen Anmeldung
 - VIII ☐ Bestimmte Bemerkungen zur internationalen Anmeldung

Datum der Einreichung des Antrags	Datum der Fertigstellung dieses Berichts
27/01/2000	20.12.2000

Name und Postanschrift der mit der internationalen vorläufigen Prüfung beauftragten Behörde:

Europäisches Patentamt
D-80298 München
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Bevollmächtigter Bediensteter

Martinozzi, A

Tel. Nr. +49 89 2399 8247

INTERNATIONALER VORLÄUFIGER PRÜFUNGSBERICHT

Internationales Aktenzeichen PCT/CH98/00376

I. Grundlage des Berichts

1. Dieser Bericht wurde erstellt auf der Grundlage (*Ersatzblätter, die dem Anmeldeamt auf eine Aufforderung nach Artikel 14 hin vorgelegt wurden, gelten im Rahmen dieses Berichts als "ursprünglich eingereicht" und sind ihm nicht beigefügt, weil sie keine Änderungen enthalten.)*:
Beschreibung, Seiten:

2-5	ursprüngliche Fassung			
1,1a	eingegangen am	27/09/2000	mit Schreiben vom	25/09/2000

Patentansprüche, Nr.:

1-12	eingegangen am	22/11/2000	mit Schreiben vom	20/11/2000

Zeichnungen, Blätter:

1/2,2/2	ursprüngliche Fassung

2. Hinsichtlich der **Sprache**: Alle vorstehend genannten Bestandteile standen der Behörde in der Sprache, in der die internationale Anmeldung eingereicht worden ist, zur Verfügung oder wurden in dieser eingereicht, sofern unter diesem Punkt nichts anderes angegeben ist.

 Die Bestandteile standen der Behörde in der Sprache: zur Verfügung bzw. wurden in dieser Sprache eingereicht; dabei handelt es sich um

 ☐ die Sprache der Übersetzung, die für die Zwecke der internationalen Recherche eingereicht worden ist (nach Regel 23.1(b)).

 ☐ die Veröffentlichungssprache der internationalen Anmeldung (nach Regel 48.3(b)).

 ☐ die Sprache der Übersetzung, die für die Zwecke der internationalen vorläufigen Prüfung eingereicht worden ist (nach Regel 55.2 und/oder 55.3).

3. Hinsichtlich der in der internationalen Anmeldung offenbarten **Nucleotid- und/oder Aminosäuresequenz** ist die internationale vorläufige Prüfung auf der Grundlage des Sequenzprotokolls durchgeführt worden, das:

 ☐ in der internationalen Anmeldung in schriftlicher Form enthalten ist.

 ☐ zusammen mit der internationalen Anmeldung in computerlesbarer Form eingereicht worden ist.

 ☐ bei der Behörde nachträglich in schriftlicher Form eingereicht worden ist.

 ☐ bei der Behörde nachträglich in computerlesbarer Form eingereicht worden ist.

 ☐ Die Erklärung, daß das nachträglich eingereichte schriftliche Sequenzprotokoll nicht über den Offenbarungsgehalt der internationalen Anmeldung im Anmeldezeitpunkt hinausgeht, wurde vorgelegt.

 ☐ Die Erklärung, daß die in computerlesbarer Form erfassten Informationen dem schriftlichen Sequenzprotokoll entsprechen, wurde vorgelegt.

4. Aufgrund der Änderungen sind folgende Unterlagen fortgefallen:

 ☐ Beschreibung, Seiten:
 ☐ Ansprüche, Nr.:
 ☐ Zeichnungen, Blatt:

5. ☐ Dieser Bericht ist ohne Berücksichtigung (von einigen) der Änderungen erstellt worden, da diese aus den angegebenen Gründen nach Auffassung der Behörde über den Offenbarungsgehalt in der ursprünglich eingereichten Fassung hinausgehen (Regel 70.2(c)).

 (Auf Ersatzblätter, die solche Änderungen enthalten, ist unter Punkt 1 hinzuweisen;sie sind diesem Bericht beizufügen).

6. Etwaige zusätzliche Bemerkungen:

V. Begründete Feststellung nach Artikel 35(2) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit; Unterlagen und Erklärungen zur Stützung dieser Feststellung

1. Feststellung

Neuheit (N)	Ja:	Ansprüche	1-12
	Nein:	Ansprüche	
Erfinderische Tätigkeit (ET)	Ja:	Ansprüche	1-12
	Nein:	Ansprüche	
Gewerbliche Anwendbarkeit (GA)	Ja:	Ansprüche	1-12
	Nein:	Ansprüche	

2. Unterlagen und Erklärungen
 siehe Beiblatt

Es wird auf folgende Druckschrift verwiesen:

D1: US 5 566 224 A (LUNDHOLM ANDREW S ET AL) 15. Oktober 1996.

Zu Punkt V

1) Die Druckschrift **D1**, die u.a. eine in einem Spiegel integrierte (Flach-)Anzeige für Kommunikationsgeräte beschreibt, wird als nächstliegender Stand der Technik gegenüber dem Gegenstand des **Anspruchs 1** angesehen. Sie offenbart, in Übereinstimmung mit dessem Oberbegriff, eine Flachanzeige für ein elektrisch autonomes Gerät (vgl. Figur 3), auf welcher Informationen anzeigbar sind, und welche Flachanzeige elektrisch ansteuerteuerbar ist, um reflektierend zu werden. Hierzu kommen laut D1 eine elektrochromische Spiegelschicht im Vordergrund sowie eine beispielsweise konventionelle Flüssigkristall- bzw. LCD-Hintergrundanzeigeschicht zum Einsatz (vgl. Figur 3, 308; Spalte 3, Zeilen 28 bis 45).

Im Unterschied hierzu wird durch **Anspruch 1** eine Flachanzeige definiert, die dadurch gekennzeichnet ist, daß sie dank ihrer speziellen Schichtenanordnung, zusätzlich zur selektiven Reflektivität nicht nur eine, sondern zwei Informationsdarstellungsebenen aufweist. Dabei wird, bei gleicher Anzahl von elektrischen Steuerungen (einer Steuerung für die Hintergrundschicht sowie einer für die Vordergrundschicht) wie im durch die **D1** nahegelegenem Anwendungsfall (nämlich einer Steuerung für den elektrochromischen Spiegel sowie mindestens einer für die beispielsweise in LCD-Technologie ausgeführte Hintergrundanzeige), d.h. letztendlich bei vergleichbarem wenn nicht niedrigerem Aufwand, ein erhöhtes Maß an Flexibilität der Anzeige ermöglicht.

Weder in der **D1** noch in irgendeiner der im Internationalen Recherchenbericht zitierten Druckschriften sind Hinweise enthalten, die den Fachmann unmittelbar dazu führen würden, mit einer vergleichbar einfachen Schichtenanordnung - wie sie in Anspruch 1 definiert ist - eine Flachanzeige zu realisieren, die eine solche Vielfalt von Informationsdarstellungsmöglichkeiten (die ganze Anzeige als Spiegel, Anzeige bereichsweise spiegelnd, farbiger Text auf spiegelndem Hintergrund, farbiger Text auf andersfarbigem Hintergrund, spiegelnder Text auf farbigem Hintergrund, usw.) erlauben würde.

Der Gegenstand des Anspruchs 1 wird daher als auf einem erfinderischen Schritt beruhend, und folglich der **Anspruch 1** als den Erfordernissen der **Artikel 33(2) und (3) PCT** genügend, angesehen.

2) Da sie alle in **Anspruch 1** definierten Merkmale enthalten, genügen die **Ansprüche 2 bis 12** selbstverständlich ebenso den in den **Artikeln 33(2) und (3) PCT** festgelegten Erfordernissen.

Flachanzeige und Mobilfunktelefon mit einer Flachanzeige

Die vorliegende Erfindung betrifft eine Flachanzeige. Die vorliegende Erfindung betrifft insbesondere eine Flachanzeige für ein elektrisch autonomes Gerät, zum Beispiel ein Mobilfunktelefon.

Mobilfunktelefone werden immer miniaturisierter und können daher problemlos immer in der Tasche oder in einer Handtasche mitgenommen werden. Dasselbe gilt auch für andere tragbare elektronische Geräte, wie zum Beispiel Taschenrechner, Laptops, Palmtops, usw.

In der Patentschrift US 5566224 wird ein funkbasiertes Kommunikationsgerät beschrieben, das mit einer Anzeige gekoppelt ist, auf der durch das Kommunikationsgerät Informationen angezeigt werden können. Gemäss der Patentschrift US 5566224 kann die Anzeige zum Darstellen der Informationen hinter einem durchsichtigen Fenster in einer Spiegeloberfläche angebracht sein oder die Anzeige kann so positioniert sein, dass sie die Informationen auf einen Teil der Spiegeloberfläche projiziert. In der Patentschrift US 5566224 wird zudem auf die Möglichkeit hingewiesen, dass Teile der Spiegeloberfläche steuerbar von einem reflektierenden in einen nicht reflektierenden, durchsichtigen Zustand gesteuert werden können, so dass Informationen, die auf der hinter der Spiegeloberfläche angebrachten Anzeige dargestellt werden, für einen Betrachter auf der Vorderseite der Spiegeloberfläche sichtbar sind.

Es ist ein Ziel dieser Erfindung, ein Mobilfunktelefon mit anderen Funktionen zu versehen, die unterwegs auch immer wieder gebraucht werden.

Gemäss dieser Erfindung wird dieses Ziel durch die Merkmale des Anspruches 1 erzielt.

Insbesondere wird dieses Ziel dank einer Flachanzeige erreicht, die elektrisch angesteuert werden kann, so dass die Anzeigefläche reflektierend gemacht werden kann.

Auf diese Weise kann die Anzeige des Geräts auch als praktischer Taschenspiegel verwendet werden.

Vorzugsweise kann die Anzeige elektrisch angesteuert werden, um reflektierend zu werden, wenn keine Informationen angezeigt werden, insbesondere im Stand-by-Modus. In einer noch bevorzugten Variante der Erfindung kann auch nur ein Teil der Anzeigefläche reflektierend gemacht werden; Informationen und/oder Werbungen können auf dem übrigen Teil der Anzeigefläche angezeigt werden. Auf diese Weise können die Benutzer wirkungsvoll auf wichtige Informationen und insbesondere auf Dienstanbieter-Firmennamen und Logos wirkungsvoll aufmerksam gemacht werden.

Ansprüche

1. Flachanzeige (10) für ein elektrisch autonomes Gerät (1), auf welcher Informationen anzeigbar sind, und welche Flachanzeige (10) elektrisch ansteuerbar ist, um reflektierend zu werden, dadurch gekennzeichnet,

dass die Flachanzeige (10) eine Hintergrund-Anzeigeschicht (102, 103) umfasst, die mit elektrischen Steuerungssignalen von einem reflektierenden in einen nicht reflektierenden, farbigen Zustand änderbar ist, wobei die Hintergrund-Anzeigeschicht (102, 103) eine Anzeigeschicht (102), die mit elektrischen Steuerungssignalen von einem durchsichtigen in einen farbigen Zustand ansteuerbar ist, und eine reflektierende Schicht (103) umfasst, und

dass die Flachanzeige (10) eine über der Hintergrund-Anzeigeschicht (102, 103) angeordnete Vordergrund-Anzeigeschicht (101) umfasst, die mit anderen elektrischen Steuerungssignalen von einem durchsichtigen in einen nicht durchsichtigen Zustand änderbar ist.

2. Flachanzeige gemäss Anspruch 1, dadurch gekennzeichnet, dass sie elektrisch ansteuerbar ist, so dass nur ein Teil der benannten Anzeige reflektierend wird.

3. Flachanzeige gemäss Anspruch 2, dadurch gekennzeichnet, dass Text- und/oder Bild-Informationen auf dem übrigen, nicht reflektierenden Teil der Anzeige anzeigbar sind.

4. Flachanzeige gemäss einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, dass die reflektierende Schicht (103) konkav oder konvex ist.

5. Flachanzeige gemäss einem der Ansprüche 1 bis 4, dadurch gekennzeichnet, dass die benannte Vordergrund-Anzeigeschicht (101) eine Flüssigkristallanzeige umfasst.

6. Flachanzeige gemäss einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, dass die benannte Hintergrund-Anzeigeschicht (102, 103) eine Flüssigkristallanzeige umfasst.

7. Flachanzeige gemäss einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, dass die benannte reflektierende Schicht (103) einen Film aus Aluminium umfasst.

8. Mobilfunktelefon (1) mit einer Flachanzeige gemäss einem der Ansprüche 1 bis 7.

9. Mobilfunktelefon gemäss Anspruch 8, dadurch gekennzeichnet, dass es eine Identifizierungskarte (13) enthält, dass ein Prozessor in der Identifizierungskarte integriert ist und dass der reflektierende Zustand der Anzeige mit diesem Prozessor ansteuerbar ist.

10. Mobilfunktelefon gemäss Anspruch 8 oder 9, dadurch gekennzeichnet, dass der reflektierende Zustand der Anzeige mit Datenmeldungen fernsteuerbar ist.

11. Mobilfunktelefon gemäss einem der Ansprüche 8 bis 10, dadurch gekennzeichnet, dass es ein Bedienungselement (120) umfasst, um den reflektierenden oder nicht reflektierenden Zustand der Anzeige (10) zu steuern.

12. Mobilfunktelefon gemäss einem der Ansprüche 8 bis 11, dadurch gekennzeichnet, dass die Anzeige reflektierend ist, wenn das Mobilfunktelefon ausgeschaltet ist.

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference *(if desired) (12 characters maximum)* 81.318/CS/mb

Box No. I TITLE OF INVENTION

Flat Display and Mobile Radio Telephone with a Flat Display"

Box No. II APPLICANT

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

SWISSCOM AG
Viktoriastrasse 21
3050 Berne (Switzerland)

☐ This person is also inventor.

Telephone No.

Facsimile No.

Teleprinter No.

State *(that is, country)* of nationality: Switzerland

State *(that is, country)* of residence: Switzerland

This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

KELLER, Judith
Wannenfeldstr. 97
8500 Frauenfeld (Switzerland)

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is, country)* of nationality: Switzerland

State *(that is, country)* of residence: Switzerland

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☒ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: ☒ agent ☐ common representative

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

BOVARD LTD
Patent Attorneys
Optingenstrasse 16
3000 Berne 25 (Switzerland)

Telephone No. 031/335 20 00

Facsimile No. 031/332 81 59

Teleprinter No. 911 907 bova ch

☐ **Address for correspondence:** Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

If none of the following sub-boxes is used, this sheet should not be included in the request.

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

RITTER, Rudolf
Rossweidweg 8
3052 Zollikofen (Switzerland)

This person is:
- ☐ applicant only
- ☒ XX applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is, country)* of nationality: Switzerland

State *(that is, country)* of residence: Switzerland

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☒ XX the United States of America only
- ☐ the States indicated in the Supplemental Box

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

This person is:
- ☐ applicant only
- ☐ applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is, country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☐ the United States of America only
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Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

This person is:
- ☐ applicant only
- ☐ applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is, country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☐ the United States of America only
- ☐ the States indicated in the Supplemental Box

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

This person is:
- ☐ applicant only
- ☐ applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is, country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☐ the United States of America only
- ☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on another continuation sheet.

Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) *(mark the applicable check-boxes; at least one must be marked)*:

Regional Patent

- ☒ **AP** **ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA** **Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP** **European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA** **OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT *(if other kind of protection or treatment desired, specify on dotted line)*

National Patent *(if other kind of protection or treatment desired, specify on dotted line)*:

- ☒ AL Albania
- ☒ AM Armenia
- ☒ AT Austria ..and.utility.model...
- ☒ AU Australia
- ☒ AZ Azerbaijan
- ☒ BA Bosnia and Herzegovina
- ☒ BB Barbados
- ☒ BG Bulgaria
- ☒ BR Brazil
- ☒ BY Belarus
- ☒ CA Canada
- ☒ CH and LI Switzerland and Liechtenstein
- ☒ CN China
- ☒ CU Cuba
- ☒ CZ Czech Republic .and.utility.model
- ☒ DE Germany.and.utility.model...
- ☒ DK Denmark.and.utility.model...
- ☒ EE Estonia .and.utility.model...
- ☒ ES Spain
- ☒ FI Finland.and.utility.model.....
- ☒ GB United Kingdom
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- ☒ HU Hungary
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- ☒ JP Japan
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- ☒ KG Kyrgyzstan
- ☒ KP Democratic People's Republic of Korea
- ☒ KR Republic of Korea
- ☒ KZ Kazakhstan
- ☒ LC Saint Lucia
- ☒ LK Sri Lanka
- ☒ LR Liberia
- ☒ LS Lesotho
- ☒ LT Lithuania
- ☒ LU Luxembourg
- ☒ LV Latvia
- ☒ MD Republic of Moldova
- ☒ MG Madagascar
- ☒ MK The former Yugoslav Republic of Macedonia
- ☒ MN Mongolia
- ☒ MW Malawi
- ☒ MX Mexico
- ☒ NO Norway
- ☒ NZ New Zealand
- ☒ PL Poland
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- ☒ RO Romania
- ☒ RU Russian Federation
- ☒ SD Sudan
- ☒ SE Sweden
- ☒ SG Singapore
- ☒ SI Slovenia
- ☒ SK Slovakia .and.utility.model.....
- ☒ SL Sierra Leone
- ☒ TJ Tajikistan
- ☒ TM Turkmenistan
- ☒ TR Turkey
- ☒ TT Trinidad and Tobago
- ☒ UA Ukraine
- ☒ UG Uganda
- ☒ US United States of America
- ☒ UZ Uzbekistan
- ☒ VN Viet Nam
- ☒ YU Yugoslavia
- ☒ ZW Zimbabwe

Check-boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

- ☐
- ☐
- ☐

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. *(Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)*

Box No. VI PRIORITY CLAIM ☐ Further priority claims are indicated in the Supplemental Box.

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application:* regional Office	international application: receiving Office
item (1) ----------	----------			
item (2)				
item (3)				

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) *(only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office)* identified above as item(s): _____

* *Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.*

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) *(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):*

ISA /

Request to use results of earlier search; reference to that search *(if an earlier search has been carried out by or requested from the International Searching Authority):*

Date *(day/month/year)* Number Country *(or regional Office)*

Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:

request	:	4
description (excluding sequence listing part)	:	5
claims	:	3
abstract	:	1
drawings	:	2
sequence listing part of description	:	
Total number of sheets	:	15

This international application is accompanied by the item(s) marked below:

1. ☒ fee calculation sheet
2. ☒ separate signed power of attorney
3. ☐ copy of general power of attorney; reference number, if any:
4. ☐ statement explaining lack of signature
5. ☐ priority document(s) identified in Box No. VI as item(s):
6. ☐ translation of international application into (language):
7. ☐ separate indications concerning deposited microorganism or other biological material
8. ☐ nucleotide and/or amino acid sequence listing in computer readable form
9. ☐ other *(specify)*:

Figure of the drawings which should accompany the abstract: 4

Language of filing of the international application: German

Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

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1. Date of actual receipt of the purported international application:
2. Drawings: ☐ received: ☐ not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:
4. Date of timely receipt of the required corrections under PCT Article 11(2):
5. International Searching Authority (if two or more are competent): ISA /
6. ☐ Transmittal of search copy delayed until search fee is paid.

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